

AMENDMENT

IN THE CLAIMS:

Please amend the claims as follows:

1-8. (Canceled)

9. (Currently amended) ~~Catalyst~~ A composite catalyst for water electrolysis, comprising iridium oxide particles deposited on or dispersed around inorganic oxide particles ~~and high surface area inorganic oxide~~, wherein ~~the~~ said inorganic oxide particles have ~~has~~ a BET surface area in the range of 50 to 400 m²/g ~~and is~~ and are present in a quantity of less than 20 wt.% based on the total weight of the composite catalyst.

10. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 9, further comprising ruthenium oxide in an amount resulting in an Ir / Ru-atomic ratio in the range of 4/1 to 1/4.

11. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 9, wherein the inorganic ~~oxide is~~ oxide particles are selected from the group consisting of titania (TiO₂), silica (SiO₂), alumina (Al₂O₃), zirconia (ZrO₂), tin dioxide (SnO₂), doped tin oxide (SnO₂/F), ceria, CeO₂/ZrO₂, niobium pentoxide (Nb₂O₅), tantalum pentoxide (Ta₂O₅) and combinations thereof.

12. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 10, wherein the inorganic ~~oxide is~~ oxide particles are selected from the group consisting of titania (TiO₂), silica (SiO₂), alumina (Al₂O₃), zirconia (ZrO₂), tin dioxide (SnO₂), doped tin oxide (SnO₂/F), ceria, CeO₂/ZrO₂, niobium pentoxide (Nb₂O₅), tantalum pentoxide (Ta₂O₅) and combinations thereof.

13. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 9, wherein the water solubility of the inorganic ~~oxide (as~~ oxide particles, as determined according to EN ISO 787, part 8) ~~is~~ is lower than 0.15 g/l, at 20°C.

14. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 9, wherein the water solubility of the inorganic oxide particles, as determined according to EN ISO 787, part 8) ~~is 8,~~ is lower than 0.05 g/l at 20 °C.

15. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 10, wherein the water solubility of the inorganic oxide particles, as determined according to EN ISO 787, part 8) ~~is 8,~~ is lower than 0.15 g/l, at 20°C.

16. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 11, wherein the water solubility of the inorganic oxide particles, as determined according to EN ISO 787, part 8) ~~is 8,~~ is lower than 0.15 g/l, at 20°C.

17. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 9, wherein the iridium ~~oxide comprises~~ oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

18. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 10, wherein the iridium ~~oxide comprises~~ oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

19. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 11, wherein the iridium ~~oxide comprises~~ oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

20. (Currently amended) ~~Catalyst~~ The composite catalyst according to claim 12, wherein the iridium ~~oxide comprises~~ oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

21-26. (Canceled)

27. (Withdrawn, Currently amended) An article of manufacture comprising the composite catalyst according to claim 9 as an anode catalyst in an electrode.

28. (Withdrawn, Currently amended) A catalyst-coated membrane (~~CCMs~~) ~~coated with (CCM)~~ comprising the composite catalyst according to claim 9.

29. (Withdrawn, Currently amended) A membrane-electrode assembly (~~MEAs~~) ~~for PEM~~ (MEA) for PEM water electrolysis containing the composite catalyst according to claim 9.

30. (Withdrawn, Currently amended) An article of manufacture selected from the group consisting of a regenerative fuel cell (RFC), a sensor and an electrolyser containing the composite catalyst according to claim 9.

31. (New) A composite catalyst made by a process which comprises:

- a) making a mixture by dissolving an iridium precursor compound and optionally a ruthenium precursor compound in an aqueous solution containing inorganic oxide particles,
- b) adjusting the pH of the mixture to be in the range of 6 to 10 to deposit or disperse iridium on or around the inorganic oxide particles,
- c) separating and drying the inorganic oxide particles having iridium deposited thereon or dispersed around, and
- d) heat treating the inorganic oxide particles at temperatures in the range of 300 to 800 °C to give the composite catalyst which contains iridium oxide particles deposited on or dispersed around the inorganic oxide particles.

32. (New) The composite catalyst of claim 31, wherein the inorganic oxide particles have a BET surface area in the range of 50 to 400 m²/g and are present in a quantity of less than 20 wt.% based on the total weight of the composite catalyst.

33. (Withdrawn, New) A process for making a composite catalyst according to claim 9, which comprises:

- a) making a mixture by dissolving an iridium precursor compound and optionally a ruthenium precursor compound in an aqueous solution containing the inorganic oxide particles,
- b) adjusting the pH of the mixture to be in the range of 6 to 10 to deposit or disperse iridium on or around the inorganic oxide particles,
- c) separating and drying the inorganic oxide particles having iridium deposited thereon or dispersed around, and
- d) heat treating the inorganic oxide particles at temperatures in the range of 300 to 800 °C to give the composite catalyst which contains iridium oxide particles deposited on or dispersed around the inorganic oxide particles.